

**WHAT IS CLAIMED IS:**

1. A cathode ray tube comprising:  
an inside surface having a designated curvature;  
a central portion having a transmission rate of 45-75%; and  
an outside surface being substantially flat with a flatness ratio (F) satisfying a mat

hematical formula of  $F = \frac{Ro}{Sd \times 1.767}$ , where Ro denotes a diagonal curvature radius of t  
he outside surface and Sd denotes a diagonal length of an effective surface of the pane  
l; the flatness ratio (F) of the outside surface is greater than 21; and a thickness at the c  
entral portion of the panel, CFT, a thickness of a vertical axis end, Tv, and a thickness o  
f a diagonal end, Td, satisfy conditions of  $1.4 < Td/CFT < 2.0$  and  $0.93 < Tv/Td < 1.00$ .

- 2.

The cathode ray tube according to claim 1, wherein a condition of  $0.146 < OAH/S.  
d < 0.170$ , where OAH denotes a length of a skirt portion of the panel and Sd denotes th  
e diagonal length of the effective surface.

3. A cathode ray tube comprising:

a central portion having a transmission rate of 45-75%;

an outside surface being substantially flat with a flatness ratio (F) satisfying a mat  
hematical formula of  $F=Ro/(Sd \times 1.767)$ , where Ro denotes a diagonal curvature radius o  
f the outside surface and Sd denotes a diagonal length of an effective surface of the pa  
nel, and the flatness ratio (F) of the outside surface is greater than 21; and

an inside surface having a designated curvature, in which a diagonal curvature ra  
dius of the inside surface, Rd, a vertical curvature radius of the inside surface, Rv, and  
a horizontal curvature radius of the inside surface, Rh, satisfy conditions of  $Rv < Rd < Rh$   
and  $1.0 < Rh/Rd < 1.9$  and  $0.3 < Rv/Rd < 0.9$ .

4.

The cathode ray tube according to claim 3, wherein a condition of  $0.146 < OAH/S_d < 0.170$  is satisfied, where OAH denotes a length of a skirt portion of the panel and  $S_d$  denotes the diagonal length of the effective surface.